

# Work Order ID 148780

July 07, 2016 4:19:48 PM

**\*148780\***

Page 1

Item ID: D4853-7 Accept **\*N900040100\*** Setup Start **\*NS1\***  
 Revision ID: Stop **\*NS2\***  
 Item Name: Top Bracket (Replaces P/N G13013-9)  
 Start Date: 7/7/2016 Start Qty: 1.00 **\*1\*** Cust Item ID:  
 Required Date: 7/7/2016 Req'd Qty: 1.00 **\*1\*** Customer:  
 Reference: TO PAINT OLD GENEVA STOCK THAT WAS ANODIZED

Approvals: Process Plan: SH Date: 7/7/16 Tooling: Date: Run Start **\*NR1\***  
 QC: Date: SPC (Y/N): Date: Stop **\*NR2\***

| Sequence ID/<br>Work Center ID | Operation<br>Description | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|

| Draw Nbr | Revision Nbr |
|----------|--------------|
| D4853    | A            |

|                |                                              |      |                                                |  |  |  |  |  |  |
|----------------|----------------------------------------------|------|------------------------------------------------|--|--|--|--|--|--|
| 160            | White Gloss(Ref:4.3.5.1) per OSI005 4.3-Alum | 0.00 | START: 10:15.<br>O.V.T: 320°<br>FINISH: 10:45. |  |  |  |  |  |  |
| <b>*160*</b>   |                                              |      |                                                |  |  |  |  |  |  |
| Powdercoat     | Memo                                         | 0.00 |                                                |  |  |  |  |  |  |
| Powder Coating | PULL D4854-7 B104864 X 1                     |      |                                                |  |  |  |  |  |  |
|                | PAINT AS PER DRAWING                         |      |                                                |  |  |  |  |  |  |

|                 |                          |      |  |  |  |  |  |  |  |
|-----------------|--------------------------|------|--|--|--|--|--|--|--|
| 170             | QC3- Inspect Part Finish | 0.00 |  |  |  |  |  |  |  |
| <b>*170*</b>    |                          |      |  |  |  |  |  |  |  |
| QC              | Memo                     | 0.00 |  |  |  |  |  |  |  |
| Quality Control |                          |      |  |  |  |  |  |  |  |

|              |                                                   |      |  |  |  |  |  |  |  |
|--------------|---------------------------------------------------|------|--|--|--|--|--|--|--|
| 180          | Identify as per dwg & Stock Location: <u>St5A</u> | 0.00 |  |  |  |  |  |  |  |
| <b>*180*</b> |                                                   |      |  |  |  |  |  |  |  |
| Packaging    | Memo                                              | 0.00 |  |  |  |  |  |  |  |
| Packaging    |                                                   |      |  |  |  |  |  |  |  |

DAS 34 9-89

DAS 38 9-89

**P.T.O.**

SEP 13 2016

DAS 6 9-89

DQA:

Date: SEP. 21, 2016QA Closed: RAH

Date:

SEP 19 2015

## WORK ORDER NON-CONFORMANCE / UPDATE

Work Order update only ☐

|                                             |                                                |                                                                                               |                                                            |                                                  |                                               |                                                                                                                                                                                                                                                                    |                                      |
|---------------------------------------------|------------------------------------------------|-----------------------------------------------------------------------------------------------|------------------------------------------------------------|--------------------------------------------------|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| Work Order: <u>148780</u>                   |                                                | DISPOSITION                                                                                   |                                                            | AGAINST DEPARTMENT/PROCESS                       |                                               |                                                                                                                                                                                                                                                                    |                                      |
| Part No. <u>D4853-7</u>                     |                                                | Rework <input checked="" type="checkbox"/>                                                    |                                                            | Skid-tube <input type="checkbox"/>               | Cross tube <input type="checkbox"/>           | Water Jet <input type="checkbox"/>                                                                                                                                                                                                                                 | Engineering <input type="checkbox"/> |
| NCR No. <u>16-6048</u>                      |                                                | Scrap <input type="checkbox"/>                                                                |                                                            | Machining <input type="checkbox"/>               | Small Fab <input type="checkbox"/>            | Prod. Eng. Coord. <input type="checkbox"/>                                                                                                                                                                                                                         | Quality <input type="checkbox"/>     |
|                                             |                                                | Use-as-is <input type="checkbox"/>                                                            |                                                            | Thermoforming <input type="checkbox"/>           | Finishing <input checked="" type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/>                                                                                                                                                                                                                       | Other <input type="checkbox"/>       |
|                                             |                                                | Suspected Unapproved <input type="checkbox"/>                                                 |                                                            | Large Fab <input type="checkbox"/>               | Composite <input type="checkbox"/>            | Supplier <input type="checkbox"/>                                                                                                                                                                                                                                  |                                      |
| Date: <u>16-09-07</u>                       | Step #: <u>160</u>                             | QTY Effective: <u>1</u>                                                                       |                                                            |                                                  |                                               | MRB (QSI042) Approval                                                                                                                                                                                                                                              |                                      |
| Description Work Order Deviation            |                                                | Disposition                                                                                   |                                                            |                                                  |                                               | DAS 9 9-89<br><u>16-09-09</u><br>Completed By<br><u>DA</u><br><u>16/09/12</u><br>15 9-89<br>Lead hand / Supervisor<br>Approval Verification<br><u>38</u><br><u>9-89</u><br><u>SEP 13 2016</u><br>QC / QA Coordinator<br>Approval<br>DAS 16 9-89<br><u>16/09/12</u> |                                      |
| too much powder coat                        |                                                | Strip and repowder coat<br>M 135418<br>START: 1:10<br>O.V.T: 300°<br>FINISH: 1:40.<br>1609-13 |                                                            |                                                  |                                               |                                                                                                                                                                                                                                                                    |                                      |
| Root Cause                                  |                                                | FAULT CATEGORY                                                                                |                                                            |                                                  |                                               |                                                                                                                                                                                                                                                                    |                                      |
| Environment <input type="checkbox"/>        | No Re-verification <input type="checkbox"/>    | Pressure/Forced <input type="checkbox"/>                                                      | Temperature/Cure <input type="checkbox"/>                  | Power Loss/Surge <input type="checkbox"/>        | Positioned Wrong <input type="checkbox"/>     |                                                                                                                                                                                                                                                                    |                                      |
| Design <input type="checkbox"/>             | Operator <input checked="" type="checkbox"/>   | Bending <input type="checkbox"/>                                                              | Set-up <input type="checkbox"/>                            | Folio/Program <input type="checkbox"/>           | Outside Dimensions <input type="checkbox"/>   |                                                                                                                                                                                                                                                                    |                                      |
| Doc/Data <input type="checkbox"/>           | Offset/Setup <input type="checkbox"/>          | Centre Not Concentric <input type="checkbox"/>                                                | BOM/Route <input type="checkbox"/>                         | Grain <input type="checkbox"/>                   | Over/Under tolerance <input type="checkbox"/> |                                                                                                                                                                                                                                                                    |                                      |
| Equip/Tooling <input type="checkbox"/>      | Supplier <input type="checkbox"/>              | Cracks <input type="checkbox"/>                                                               | Broken/Damage/Defect <input type="checkbox"/>              | Weld <input type="checkbox"/>                    | Part Incorrect <input type="checkbox"/>       |                                                                                                                                                                                                                                                                    |                                      |
| Handling/Pre <input type="checkbox"/>       | Training <input type="checkbox"/>              | Crimp/Kink/Ripple/Wave <input type="checkbox"/>                                               | Inspection Incomplete/Unqualified <input type="checkbox"/> | Wrong Stock Pulled <input type="checkbox"/>      | Part Lost/Missing <input type="checkbox"/>    |                                                                                                                                                                                                                                                                    |                                      |
| Material <input type="checkbox"/>           | Use for Testing <input type="checkbox"/>       | Cuffs <input type="checkbox"/>                                                                | Contamination <input type="checkbox"/>                     | Out of Sequence <input type="checkbox"/>         | Part Moved <input type="checkbox"/>           |                                                                                                                                                                                                                                                                    |                                      |
| Internal Transport <input type="checkbox"/> | Poor Information <input type="checkbox"/>      | Crushing <input type="checkbox"/>                                                             | Countersink <input type="checkbox"/>                       | Off-set <input type="checkbox"/>                 | Drawing <input type="checkbox"/>              |                                                                                                                                                                                                                                                                    |                                      |
| Tribal Knowledge <input type="checkbox"/>   | Rushing <input type="checkbox"/>               | Heat Treat <input type="checkbox"/>                                                           | Cut Too Short <input type="checkbox"/>                     | Mislabeled <input type="checkbox"/>              | Finish <input checked="" type="checkbox"/>    |                                                                                                                                                                                                                                                                    |                                      |
| LOA <input type="checkbox"/>                | Product Improvement <input type="checkbox"/>   | Wave/Twist in Tube <input type="checkbox"/>                                                   | Instructions Incomplete/Unclear <input type="checkbox"/>   | Fit/Function <input checked="" type="checkbox"/> | Misread <input type="checkbox"/>              |                                                                                                                                                                                                                                                                    |                                      |
| Substation <input type="checkbox"/>         | Process Improvement <input type="checkbox"/>   | Marks/Chatter <input type="checkbox"/>                                                        | Drill Holes <input type="checkbox"/>                       | Misaligned/off center <input type="checkbox"/>   | Turning Sequence <input type="checkbox"/>     |                                                                                                                                                                                                                                                                    |                                      |
| Past Expiry Date <input type="checkbox"/>   | Manufacturing Process <input type="checkbox"/> |                                                                                               |                                                            |                                                  |                                               |                                                                                                                                                                                                                                                                    |                                      |
| Misidentified <input type="checkbox"/>      | Past Due <input type="checkbox"/>              | OTHER :                                                                                       |                                                            |                                                  |                                               |                                                                                                                                                                                                                                                                    |                                      |

**Work Order ID 148780**

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**\*148780\***

Page 2

Item ID: D4853-7 Accept **\*N900040100\*** Setup Start **\*NS1\***  
Revision ID: Stop **\*NS2\***  
Item Name: Top Bracket (Replaces P/N G13013-9)  
Start Date: 7/7/2016 Start Qty: 1.00 **\*1\*** Cust Item ID:  
Required Date: 7/7/2016 Req'd Qty: 1.00 **\*1\*** Customer:  
Reference: TO PAINT OLD GENEVA STOCK THAT WAS ANODIZED

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

| Sequence ID/<br>Work Center ID | Operation<br>Description                    | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty     | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|---------------------------------------------|----------------------|---------|--------|--------------|---------------|-------------------|------------------|----------------|
| 190                            | QC21- Final Inspection - Work Order Release | 0.00                 |         |        |              |               |                   |                  |                |
| <b>*190*</b>                   |                                             |                      |         |        |              | DAS<br>21     |                   | SEP 14 2016      |                |
| QC                             | Memo                                        | 0.02                 |         |        |              | 9-89          |                   |                  |                |
| Quality Control                |                                             |                      |         |        |              |               | DAS<br>21<br>9-89 | SEP 14 2016      |                |





Work Order update only

|                                             |                                                |                                                 |                                                            |                                                |                                               |                                              |                                      |                                              |  |
|---------------------------------------------|------------------------------------------------|-------------------------------------------------|------------------------------------------------------------|------------------------------------------------|-----------------------------------------------|----------------------------------------------|--------------------------------------|----------------------------------------------|--|
| Work Order: _____                           |                                                | DISPOSITION                                     |                                                            | AGAINST DEPARTMENT/PROCESS                     |                                               |                                              |                                      |                                              |  |
| Part No. _____                              |                                                | Rework <input type="checkbox"/>                 |                                                            | Skid-tube <input type="checkbox"/>             | Cross tube <input type="checkbox"/>           | Water Jet <input type="checkbox"/>           | Engineering <input type="checkbox"/> |                                              |  |
| NCR No. _____                               |                                                | Scrap <input type="checkbox"/>                  |                                                            | Machining <input type="checkbox"/>             | Small Fab <input type="checkbox"/>            | Prod. Eng. Coord. <input type="checkbox"/>   | Quality <input type="checkbox"/>     |                                              |  |
|                                             |                                                | Use-as-is <input type="checkbox"/>              |                                                            | Thermoforming <input type="checkbox"/>         | Finishing <input type="checkbox"/>            | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/>       |                                              |  |
|                                             |                                                | Suspected Unapproved <input type="checkbox"/>   |                                                            | Large Fab <input type="checkbox"/>             | Composite <input type="checkbox"/>            | Supplier <input type="checkbox"/>            |                                      |                                              |  |
| Date :                                      |                                                | Step #:                                         |                                                            | QTY Effective :                                |                                               |                                              | MRB (QSI042) Approval                |                                              |  |
| Description Work Order Deviation            |                                                |                                                 |                                                            | Disposition                                    |                                               |                                              |                                      |                                              |  |
|                                             |                                                |                                                 |                                                            |                                                |                                               |                                              |                                      | Completed By                                 |  |
|                                             |                                                |                                                 |                                                            |                                                |                                               |                                              |                                      | Lead hand / Supervisor Approval Verification |  |
|                                             |                                                |                                                 |                                                            |                                                |                                               |                                              |                                      | QC / QA Coordinator Approval                 |  |
| Root Cause                                  |                                                | FAULT CATEGORY                                  |                                                            |                                                |                                               |                                              |                                      |                                              |  |
| Environment <input type="checkbox"/>        | <input type="checkbox"/> No Re-verification    | <input type="checkbox"/> Pressure/Forced        | <input type="checkbox"/> Temperature/Cure                  | <input type="checkbox"/> Power Loss/Surge      | <input type="checkbox"/> Positioned Wrong     |                                              |                                      |                                              |  |
| Design <input type="checkbox"/>             | <input type="checkbox"/> Operator              | <input type="checkbox"/> Bending                | <input type="checkbox"/> Set-up                            | <input type="checkbox"/> Folio/Program         | <input type="checkbox"/> Outside Dimensions   |                                              |                                      |                                              |  |
| Doc/Data <input type="checkbox"/>           | <input type="checkbox"/> Offset/Setup          | <input type="checkbox"/> Centre Not Concentric  | <input type="checkbox"/> BOM/Route                         | <input type="checkbox"/> Grain                 | <input type="checkbox"/> Over/Under tolerance |                                              |                                      |                                              |  |
| Equip/Tooling <input type="checkbox"/>      | <input type="checkbox"/> Supplier              | <input type="checkbox"/> Cracks                 | <input type="checkbox"/> Broken/Damage/Defect              | <input type="checkbox"/> Weld                  | <input type="checkbox"/> Part Incorrect       |                                              |                                      |                                              |  |
| Handling/Pre <input type="checkbox"/>       | <input type="checkbox"/> Training              | <input type="checkbox"/> Crimp/Kink/Ripple/Wave | <input type="checkbox"/> Inspection Incomplete/Unqualified | <input type="checkbox"/> Wrong Stock Pulled    | <input type="checkbox"/> Part Lost/Missing    |                                              |                                      |                                              |  |
| Material <input type="checkbox"/>           | <input type="checkbox"/> Use for Testing       | <input type="checkbox"/> Cuffs                  | <input type="checkbox"/> Contamination                     | <input type="checkbox"/> Out of Sequence       | <input type="checkbox"/> Part Moved           |                                              |                                      |                                              |  |
| Internal Transport <input type="checkbox"/> | <input type="checkbox"/> Poor Information      | <input type="checkbox"/> Crushing               | <input type="checkbox"/> Countersink                       | <input type="checkbox"/> Off-set               | <input type="checkbox"/> Drawing              |                                              |                                      |                                              |  |
| Tribal Knowledge <input type="checkbox"/>   | <input type="checkbox"/> Rushing               | <input type="checkbox"/> Heat Treat             | <input type="checkbox"/> Cut Too Short                     | <input type="checkbox"/> Mislabeled            | <input type="checkbox"/> Finish               |                                              |                                      |                                              |  |
| LOA <input type="checkbox"/>                | <input type="checkbox"/> Product Improvement   | <input type="checkbox"/> Wave/Twist in Tube     | <input type="checkbox"/> Instructions Incomplete/Unclear   | <input type="checkbox"/> Fit/Function          | <input type="checkbox"/> Misread              |                                              |                                      |                                              |  |
| Substation <input type="checkbox"/>         | <input type="checkbox"/> Process Improvement   | <input type="checkbox"/> Marks/Chatter          | <input type="checkbox"/> Drill Holes                       | <input type="checkbox"/> Misaligned/off center | <input type="checkbox"/> Turning Sequence     |                                              |                                      |                                              |  |
| Past Expiry Date <input type="checkbox"/>   | <input type="checkbox"/> Manufacturing Process |                                                 |                                                            |                                                |                                               |                                              |                                      |                                              |  |
| Misidentified <input type="checkbox"/>      | <input type="checkbox"/> Past Due              | OTHER :                                         |                                                            |                                                |                                               |                                              |                                      |                                              |  |

# Picklist Print

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Work Order ID: 148780

**\*148780\***

Parent Item: D4853-7

**\*D4853-7\***

Parent Item Name: Top Bracket (Replaces P/N G13013-9)

Start Date: 7/7/2016

Required Date: 7/7/2016

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP REV:A NEW ISSUE 13-07-22 JLM VERIFIED BY:JFS

| Component Item ID/<br>Item Name | Replacement<br>Item ID | Mfg/<br>Purch | Bin<br>Item | Primary<br>Location | Last<br>Location | Route<br>Seq ID | Unit of<br>Measure | Qty on<br>Hand | Qty per Kit | Total<br>Qty | Qty<br>Issued | Date<br>Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|
| D4853-7                         |                        | Manufactured  | No          |                     |                  |                 | Each               | 12.0000        |             | 1            |               |                |        |

**\*D4853-7\***

**\*\***

Top Bracket (Replaces P/N G13013-9)

Location

Loc Qty

Loc Code

ST519

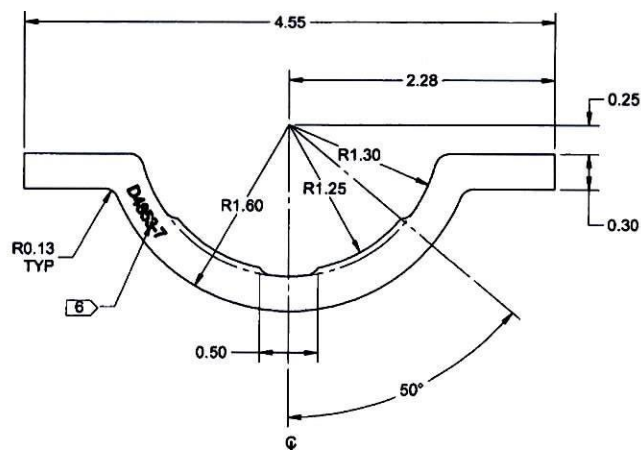
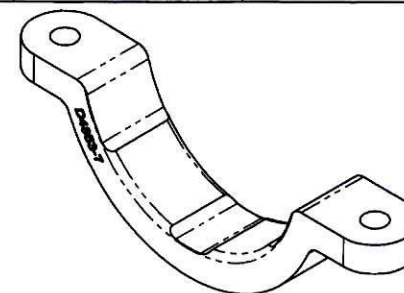
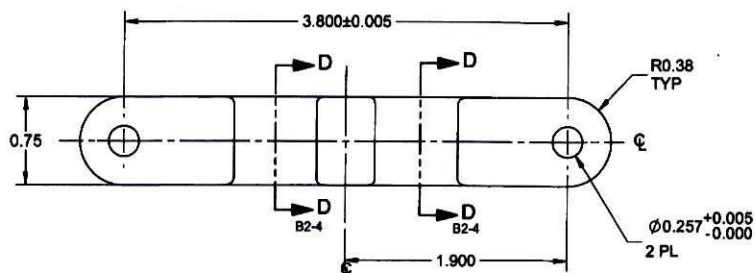
12

147092

12

X1 104864

OK 7/7/16.



R0.06 MIN - R0.10 MAX  
2 PL

**SECTION D-D**  
**SCALE 2X**

D6-4

**NOTES:**

- 1) MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR  
QQ-A-225/8 OR AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116)  
OR QQ-A-200/8 OR AMS-QQ-A-200/8 (OR AMS 4160)  
OR ASTM B211 OR ASTM B221  
PER DART SPEC M6061T68
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
POWDER COAT "WHITE" (4.3.5.1) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY AS SHOWN PER QSI 044 6.3 TO A DEPTH  
OF 0.010±0.005 IN THIS LOCATION WITH TOOL TIP  
RADIUS OF 0.015±0.005
- 7) WEIGHT: 0.12 lbs
- 8) REPLACES GENEVA P/N G13013-9

**D4853-7 TOP BRACKET**

**RELEASED**  
2013-07-16

|            |          |                                                                                                                                                                                                                                                                                                 |              |
|------------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| DESIGN     |          | <b>DART AEROSPACE LTD</b>                                                                                                                                                                                                                                                                       |              |
| DRAWN      |          | HAWKESBURY, ONTARIO, CANADA                                                                                                                                                                                                                                                                     |              |
| CHECKED    |          | DRAWING NO.                                                                                                                                                                                                                                                                                     | REV. A       |
| MFG. APPR. |          | <b>D4853</b>                                                                                                                                                                                                                                                                                    | SHEET 4 OF 4 |
| APPROVED   |          | TITLE                                                                                                                                                                                                                                                                                           | SCALE        |
| DE APPR.   |          | <b>TOP BRACKET</b>                                                                                                                                                                                                                                                                              | NTS          |
| DATE       | 13.05.15 | <small>COPYRIGHT © 2013 BY DART AEROSPACE LTD<br/>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS<br/>NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT<br/>WRITTEN PERMISSION FROM DART AEROSPACE LTD</small> |              |